

Car Brake.

No. 58,877.

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IMPROVED CAR-BRAKE.

Specification forming part of Letters Patent No. 58,877, dated October 16, 1866.

To all whom it may concern:

Be it known that I, DAVID MYERS, of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Operating Car-Brakes; and I do hereby declare and make known that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings and the letters and figures marked thereon, which form part of this specification.

My said invention consists in a novel arrangement of mechanical devices through which the ordinary bell-cord passes in each car composing the train, whereby the engineer, by simply pulling upon the bell-cord, is enabled to apply all the brakes upon the train simultaneously, and by giving the bell-cord a second pull may in like manner release said brakes, while at the same time the conductor may pull upon said bell-cord for the purpose of signaling to the engineer in the usual manner without affecting the brakes, and the brakemen may likewise apply the brakes in the ordinary way.

To enable those skilled in the art to understand how to construct and use my invention, I will proceed to describe the same with particularity, making reference in so doing to the aforesaid drawings, in which—

Figure 1 is a transverse sectional view of a car, showing a side view of my invention as arranged therein. Fig. 2 is a top view of my invention, the case being removed at the line *x* in Fig. 1; and Fig. 3 is a bottom view of the same, the case being removed at the line *y* in said Fig. 1.

Similar letters of reference in the several figures denote the same parts of my invention.

A represents a suitable stationary case or frame, in which the operating parts of my invention are arranged and supported, and secured at the top of the car, as shown in Fig. 1, by means of the screws or bolts *a*, or in any other suitable manner.

B represents a movable block, which has a longitudinal sliding movement in a suitable groove or run in the frame A, and has attached thereto a cord, *b*, which passes down at the side of the car, as shown, and is connected

with the apparatus arranged beneath the car for applying and releasing the brakes.

D represents a pulley or sheave, which is arranged in connection with said block B.

E E are stationary pulleys, supported in suitable bearings in the frame A; and C represents the bell-cord, which is arranged with respect to the said pulleys, as seen in Fig. 3.

F F represent two arms, arranged upon each side of the block B, being pivoted to the frame A at *f*, and being connected together by a cross-bar, *d*, so as to move uniformly and together.

H represents arms, pivoted at one end to the bars F, and held upon the periphery of the wheels G G, which are fixed upon the shafts of the wheels or pulleys E by means of the springs I or their equivalent, as shown.

J represents a movable stop, made and arranged so as to be turned from one side to the other by turning the handle L, projecting down through the case, which is secured in the desired position, however, by movable pins *m*, as shown in Fig. 3. In adjusting the position of the stop J, it should always be turned toward the rear of the train.

The nature and construction of my invention having been described, I will now describe its operation.

When the conductor desires to signal the engineer he pulls the bell-cord, and its friction upon the pulley E causes it, and also the friction-wheel G, to revolve, and as the arm H is held in contact with said wheel G by the spring I, as aforesaid, the revolution of said wheel G draws the levers F into the position indicated in Fig. 2, whereby the notch or stop *c* is thrust in front of the slide B, and effectually prevents its moving up, and the cord C thus may be drawn as forcibly as desired without bringing any tension upon the cord *b*, which is attached to the apparatus beneath the car, whereby the brakes are applied and released.

When, however, the engineer, seeing some urgent necessity for stopping the train, pulls upon the cord, the levers F are prevented from moving in to stop the block B by means of the stop J, and the tension of the bell-cord

therefore moves said block B forward in its appropriate groove, and thus draws upon the cord *b* and releases the power for applying the brakes, which are then closed, and stop the train.

The mechanism beneath the car may be arranged so that a second pull upon the bell-cord will release the brakes, if desired.

Having described the construction and operation of my invention, I will now specify what I claim and desire to secure by Letters Patent.

1. Controlling the movements of the sliding block B by means of oscillating levers F, substantially as and for the purposes shown and described.

2. Operating the levers F by means of the

arms H, friction-wheels G, and springs I, for holding the arms upon the said wheels, substantially in the manner and for the purposes specified.

3. The combination of the above-mentioned parts with the sliding block B and the cord *b*, connected with the apparatus beneath the car, arranged and operating substantially as specified, and for the purposes set forth.

4. In combination with the above, the arrangement of the bell-cord, operating substantially as and for the purposes shown and described.

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